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## FOREWORD

This Index covers the papers and technical correspondence that appeared in *IEEE Transactions on Antennas and Propagation* and predecessor publications from the inception of the journal in 1952 to 1968. For simplicity, volume numbers are not given in the index; also, the journal code *T-AP* is used consistently, although the name of the publication was slightly changed several times to reflect changes in the structure of IRE and its merger into IEEE. The actual journal designations and volume numbers are as follows:

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The primary entry for an item is in the Author Index, listed under the name of the first author, and includes mention of subsequent comments, corrections, etc., that have appeared through 1968. This entry includes the names of all authors, the title (followed by C within parentheses if the item is a Communication), and published location of the item—journal code, year, month, and beginning page. Cross-references are made to the first author from every coauthor, commenter, etc.; these cross-references include the publication date to assist in identifying the item.

In the Subject Index there are several entries for each item, under descriptive subject headings that establish a context. Since full details appear in the Author Index, referencing in the Subject Index is in abbreviated form only.

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- Electromagnetic fields**; cavities of two imperfectly conducting sheets. *Harrison, Charles W., Jr.*, T-AP 65 Jan 149
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- Electromagnetic fields**; transient propagation through infinite sheets, spherical shells, and hollow cylinders. *Harrison, Charles W., Jr.*, T-AP 64 May 319
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- Electromagnetic propagation**; jungle terrain; lossy slab over conducting half-space; dipole radiation; asymptotic theory. *Wait, James R.*, T-AP 67 Sep 645
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- Electromagnetic propagation**; scattering theory; dielectric bodies of low density; coherent scattering integral; backscattering echo areas of conic shapes. *Plonus, Marvin A.*, T-AP 67 May 437
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- Electromagnetic radiation**; dielectric slabs. *Tamir, Theodor.*, T-AP 65 May 410
- Electromagnetic radiation**; electric dipoles with cylindrical columns of insulation; warm plasma. *Seshadri, S. R.*, T-AP 65 Jul 613
- Electromagnetic radiation**; elementary cylinder antennas; slotted enclosures. *Olte, Andrejs.*, T-AP 65 Sep 691
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- Electromagnetic radiation**; sources in plasma. *Seshadri, S. R.*, T-AP 65 Jan 79
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- Electromagnetic scattering**; conducting loops and rectangles; resonant frequencies; scattering cross sections; experimental data. *Lin, J. L.*, T-AP 67 May 477
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- Electromagnetic theory**; compressible isotropic lossy plasma; compressivity tensor; dispersion equation; wave equation; decoupling in the lossless case; normalization of the equations. *Chen, Hollis H. C.*, T-AP 66 Jul 497
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- Fading**; cf. Attenuation
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- Fading**; attenuation in rain; microwave propagation, 8 and 15 GHz. *Bleviss, Bertram C.*, T-AP 67 May 394
- Fading**; FM signals; experiments. *Riddler, R. L.*, T-AP 54 Jan 30
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- Reentry communications problems**; slot antenna theory; plasma-coating effects; radially stratified media; dielectric layers; radiation. *Tyras, George*, T-AP 67 Mar 222
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- Wave propagation**; antenna theory; radio gain analysis; dipoles over imperfectly conducting planes. *Burrows, Charles R.*, T-AP 67 May 404
- Wave propagation**; electromagnetic pulses around the earth. *Levy, Bertram R.*, T-AP 58 Jan 56
- Wave propagation**; ground wave propagation; effect of earth's curvature. *Burrows, Charles R.*, T-AP 64 Nov 789
- Wave propagation**; helices; tape helix equation; asymptotic and approximate solutions. *Mitra, Raj*, T-AP 63 Sep 585
- Wave propagation**; multimode situations. *Balmain, Keith G.*, T-AP 66 May 402
- Wave propagation**; partially coherent random media; spherically symmetric mutual-coherence function; small-angle scattering. *Beran, Mark J.*, T-AP 67 Jan 66
- Wave propagation**; pulsed electromagnetic waves; dispersive media. *Knop, Charles M.*, T-AP 64 Jul 494
- Wave propagation**; pulsed plasma. *Kurss, Herbert*, T-AP 66 May 401
- Wave propagation**; pumped media. *Holberg, Dieter E.*, T-AP 66 Mar 183
- Wave propagation**; random media; atmospheric turbulence; resolution and gain degradation; weighted circular apertures. *Heidbreder, Glenn R.*, T-AP 67 Jan 191
- Wave propagation**; random media; experimental results and theory; microwaves; scattering by random distribution of spheres; styrofoam spheres and container. *Beard, Charles I.*, T-AP 67 Jan 99
- Wave propagation**; random media; image degradation; perturbation techniques; angle of arrival variations; wavefront tilt compensation. *Heidbreder, Glenn R.*, T-AP 67 Jan 90
- Wave propagation**; random media; magnetoplasma; anisotropic background with electron-density irregularities. *Yeh, K. C.*, T-AP 67 Jul 539
- Wave propagation**; random media; quasi-monochromatic fields; partial coherence; mutual coherence functions. *Kiebertz, Richard B.*, T-AP 67 Jan 76
- Wave propagation**; random media; weak inhomogeneity cumulative effects; effective refractive index; perturbation techniques. *Brown, Wilbur P., Jr.*, T-AP 67 Jan 81
- Wave propagation**; random processes; theory. *Ament, W. S.*, T-AP 52 Aug 143
- Wave propagation**; ray theory vs normal mode theory. *McCracken, Leslie G.*, T-AP 57 Jan 137
- Wave propagation**; scattering phenomena. *Felsen, Leopold B.*, T-AP 66 May 308
- Wave propagation**; turbulent media; polarization fluctuations; angle-of-arrival fluctuations. *Strohbehn, John W.*, T-AP 67 May 416
- Wave propagation**; turbulent media; tropospheric disturbances; meteorological correlation; radio astronomy; interferometry; phase fluctuations in observed data. *Baars, J. W. M.*, T-AP 67 Jul 582
- Wave propagation constants**; impedance boundary conditions. *Streifer, William*, T-AP 64 Nov 764
- Wave propagation experiments**; spatial coherence measurement; microwaves; atmospheric turbulence effects; path length 19 km; California; preliminary data. *Etcheberry, Robert D.*, T-AP 67 Jan 136
- Wave reflections**; antenna current waves; tube-shaped cylindrical antennas. *Hallen, Erik*, T-AP 56 Jul 479
- Wave spectra**; dependence of microwave radio signal spectra; ocean roughness. *Beard, Charles I.*, T-AP 57 Apr 183
- Wave structures**; sidelobe reduction; modulated surfaces. *Cermagnani, D. J.*, T-AP 64 Jul 503
- Wave theory**; infinite Yagi arrays. *Mailloux, Robert J.*, T-AP 65 Jul 499
- Wave theory**; interfaces. *Boubaou, Georg*, T-AP 59 Dec 8140
- Wave tilt**; electromagnetic propagation; earth-ionosphere cavity. *Keiser, B. E.*, T-AP 64 Nov 793
- Wave velocities**; grid-structure backward angle-fire antennas. *Kraus, John D.*, T-AP 64 Jul 509
- Wavefront tilt compensation**; angle-of-arrival variation; wave propagation in random media. *Heidbreder, Glenn R.*, T-AP 67 Jan 90
- Wavefront tilt compensation**; atmospheric turbulence; wave propagation in random media. *Heidbreder, Glenn R.*, T-AP 67 Jan 191
- Waveguide admittance**; radiation into plasma or dielectric layers; X-band; theory and experiment. *Galejs, Janis*, T-AP 67 May 465
- Waveguide apertures**; parallel plate mutual coupling waveguides. *Dybdal, Robert B.*, T-AP 66 Sep 574
- Waveguide arrays**; solar noise studies. *Gruenberg, H.*, T-AP 54 Oct 147
- Waveguide discontinuities**; analysis of scattering by ray-optical techniques. *Felsen, L. B.*, T-AP 68 Mar 268
- Waveguide dispersion effects**; radiation patterns; linear arrays; series feed; antenna-array theory. *Sharpe, C. B.*, T-AP 67 Mar 295
- Waveguide effects**; cf. Earth-ionosphere waveguide
- Waveguide effects**; ionograms of conjugate echoes from Alouette-2 satellite. *Ramaswamy, Jayaram*, T-AP 68 Nov 771
- Waveguide effects**; step-type transition in earth-ionosphere waveguide. *Bahar, Ezekiel*, T-AP 68 Nov 673
- Waveguide effects at VLF**; earth-ionosphere waveguide; whispering gallery phenomena. *Wait, James R.*, T-AP 67 Jul 580
- Waveguide-fed apertures**; effects of inhomogeneous plasmas on input admittance; derivation and experimental confirmation. *Croswell, William F.*, T-AP 68 Jul 475
- Waveguide-fed slots**; radiation into parallel plate regions. *Gruenberg, H.*, T-AP 52 Aug 63
- Waveguide feed**; slot antenna admittance; dielectric slab media; variational methods; surface waves; higher order modes; theory and experiment. *Croswell, William F.*, T-AP 67 Sep 627
- Waveguide fixtures**; antenna array design simulation; phased arrays. *Hannan, Peter W.*, T-AP 67 Jul 574
- Waveguide junctions**; symmetrical junctions. *Auld, B.*, T-AP 52 Dec 106
- Waveguide modes**; longitudinally magnetized ferrites. *Rheinstein, John*, T-AP 65 Nov 983
- Waveguide modes**; magnetized ferrite effects. *Samaddar, S. N.*, T-AP 66 May 408
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- Waveguide simulation of infinite arrays**; active-impedance measurement; phased array antenna elements; production testing techniques. *Balfour, M. A.*, T-AP 67 Mar 313
- Waveguide slot arrays**; rectangular ridge waveguides. *Hu, A. Y.*, T-AP 61 Jan 102
- Waveguide systems**; radiation sources for elliptically polarized waves. *Mott, Harold*, T-AP 68 Jan 134
- Waveguide theory**; axially nonuniform structures; perturbation analysis; nonlinear phase propagation functions. *Richter, Stephen L.*, T-AP 67 May 422
- Waveguide theory**; random gross inhomogeneities; scattering; mode coupling; iterative perturbation techniques. *Richter, Stephen L.*, T-AP 67 Jan 70
- Waveguides**; cf. Beam waveguides; Circular waveguides; Cylindrical waveguides; Dielectric waveguides; Guided waves; Parallel-plate waveguides; Rectangular waveguides; Waveguide theory
- Waveguides**; admittance for radiation; stratified plasma; hypersonic reentry approximations. *Galejs, Janis*, T-AP 65 Jan 64
- Waveguides**; anisotropic waveguides; discontinuities at inputs. *Bresler, A. D.*, T-AP 59 Dec 8261
- Waveguides**; arbitrarily complex waves; open or closed waveguides. *Lazpati, S. R.*, T-AP 65 Nov 883
- Waveguides**; asymmetrical trough antennas; leaky wave line source radiators. *Rotman, Walter*, T-AP 59 Apr 153
- Waveguides**; attenuation; wedge and septate waveguides. *Chisholm, Robin M.*, T-AP 59 Dec 8279
- Waveguides**; branch-waveguide directional couplers; endfire X-band flush antennas. *Hanratty, Robert J.*, T-AP 63 Jul 433
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- Waveguides**; circular waveguides; gyromagnetic media; propagation constants. *Walker, L. R.*, T-AP 56 Jul 492
- Waveguides**; closely spaced transverse slots; rectangular waveguides. *Hymeman, Richard F.*, T-AP 59 Oct 335
- Waveguides**; coupled leaky waveguides; two parallel slots in cylinders. *Nishida, S.*, T-AP 60 Jul 354
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- Waveguides**; feeder lines for log periodic antennas. *Barbano, Normand*, T-AP 68 May 357
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- Waveguides**; leaky wave antennas; circular waveguides. *Goldstone, Leonard O.*, T-AP 61 May 280
- Waveguides**; leaky wave antennas; rectangular waveguides. *Goldstone, Leonard O.*, T-AP 59 Oct 307
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- Waveguides**; multimode data resolution. *Mitra, R.*, T-AP 65 Mar 325



- Waveguides**; open fast wave structures; scattering resonances. *Li, R. C. M.*, T-AP 65 Nov 948
- Waveguides**; open surface mode coupling. *Snyder, Allan W.*, T-AP 65 Sep 821
- Waveguides**; parallel-plate waveguides; thin-wire receiving antennas; integral equations; numerical solution and results. *Taylor, Clayborne D.*, T-AP 67 Jul 572
- Waveguides**; phased array antenna simulation. *Hannan, Peter W.*, T-AP 65 May 342
- Waveguides**; phased array antennas; simulated impedance. *Hannan, Peter W.*, T-AP 63 Nov 715
- Waveguides**; plasma radiation losses; space reentry simulation. *Ville-neuve, Alfred T.*, T-AP 65 Jan 115
- Waveguides**; principal-plane radiation patterns of rectangular waveguides; wedge-diffraction analysis. *Ryan, Charles E., Jr.*, T-AP 68 Jul 488
- Waveguides**; rectangular waveguides; drive monopole arrays. *Altshuler, Edward E.*, T-AP 62 Sep 558
- Waveguides**; rectangular waveguides; effect of slot thickness. *Felsen, Leopold B.*, T-AP 52 Feb 107
- Waveguides**; rectangular waveguides; narrow radiating slots; impedance properties; measurements. *Oliner, Arthur A.*, T-AP 57 Jan 12
- Waveguides**; rectangular waveguides; narrow radiating slots; impedance properties; theory. *Oliner, Arthur A.*, T-AP 57 Jan 4
- Waveguides**; rectangular waveguides in phased array. *Galindo, Victor*, T-AP 66 Mar 149
- Waveguides**; rectangular waveguides in phased array. *Wu, Chen Pang*, T-AP 66 Mar 163
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- Waveguides**; surface-wave launching; parallel-plate waveguides. *Angulo, Carlos M.*, T-AP 59 Oct 359
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- Waveguides**; triangular phased array antenna simulation. *Balfour, Menachem A.*, T-AP 65 May 475
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- Waveguides**; Wiener-Hopf integral equations. *Mitra, Raj*, T-AP 59 Dec S244
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- Waveguides**; Yagi array Antennas. *Rao, B. Rama*, T-AP 65 Sep 675
- Waves**; cf. Decametric waves; Electromagnetic waves; ELF waves; Hectometer waves; Microwaves; Plane waves; Plasma-surface waves; Radiowaves; Surface waves; Traveling waves; UHF waves; VHF waves
- Waves**; guided waves; possibility in earth's crust. *Wait, James R.*, T-AP 63 May 330
- Waves**; lateral waves; anisotropic plasma interfaces. *Felsen, Leopold B.*, T-AP 62 May 347
- Weather**; effects on VHF propagation. *Toman, Kurt*, T-AP 52 Dec 20
- Wedge-diffraction analysis**; parallel-plate waveguides. *Ryan, Charles E., Jr.*, T-AP 68 Jul 490
- Wedge-diffraction analysis**; rectangular waveguides. *Ryan, Charles E., Jr.*, T-AP 68 Jul 488
- Wedge waveguides**; attenuation; septate waveguides. *Chisholm, Robin M.*, T-AP 59 Dec S279
- Wedge surfaces**; linearly varying surface impedance; electromagnetic properties. *Felsen, Leopold B.*, T-AP 59 Dec S231
- Wedges**; cf. Double wedges
- Wedges**; conducting wedges; scattering of polarized plane waves. *Aidala, V. J.*, T-AP 68 Nov 776
- Wedges**; infinite conducting wedges; radiation from apertures. *Kritikos, Haralambos, N.*, T-AP 64 Jan 96
- Wedges**; perfectly conducting wedges; radiation from source distributions. *Felsen, Leopold B.*, T-AP 64 Sep 653
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- Wideband vertically polarized antennas**; antenna theory; mathematical and experimental studies. *Foldes, Peter*, T-AP 60 Sep 469
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- Wind shear**; tropospheric scatter signal correlations. *Bauer, Louis H.*, T-AP 61 Sep 466
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- Wire-grid lens antennas**; angle-diversity performance. *Jones, Edward M. T.*, T-AP 67 May 484
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- WKB method**; electromagnetic propagation and scattering. *Saxon, D. S.*, T-AP 59 Dec S320
- WKB method**; electromagnetic theory. *Imah, Isao*, T-AP 56 Jul 233
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- Yagi structures**; phase velocities; wave propagation; infinite structures. *Sengupta, Dipak L.*, T-AP 59 Jul 234
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